

**FORMULASI OBAT KUMUR JERNIH BERBASIS MINYAK ATSIRI
DENGAN TEKNIK SOLUBILISASI SERTA PENAMBAHAN
EKSTRAK RESIN JERNANG (*Daemonorops draco*)**

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ABSTRAK

Karies gigi akibat *Streptococcus mutans* dapat dicegah dengan obat kumur, namun formulasi sintetik berpotensi menimbulkan efek samping sehingga diperlukan alternatif alami. Minyak atsiri (serai wangi, kayu manis, cengkih, jeruk nipis) serta ekstrak resin jernang (*Daemonorops draco*) diketahui mengandung senyawa antibakteri. Penelitian ini merancang formulasi obat kumur jernih berbasis minyak atsiri dan kombinasi dengan ekstrak resin jernang serta melihat aktivitas antibakteri sediaan. Delapan formula disusun, kemudian dievaluasi meliputi organoleptik, pH, viskositas, homogenitas, serta diuji aktivitas antibakteri terhadap *S.mutans* dengan metode difusi cakram. Hasil penelitian menunjukkan pada pemeriksaan organoleptis pada formula tidak memberikan perbedaan warna, rasa, bau, kecuali pada kombinasi jeruk nipis dan jernang mengalami perubahan warna menjadi merah keruh. pada uji pH seluruh formula berada pada rentang 6,2-7,5, Uji viskositas konsisten dalam rentang 4-7 cP, pemeriksaan homogenitas seluruh formula menunjukkan hasil homogen dan uji *cycling test* menunjukkan seluruh formula tetap stabil kecuali F8 yang memperlihatkan kekeruhan. Namun semua formula obat kumur dengan konsentrasi minyak atsiri di dalam batas yang aman dan memenuhi estetika warna tidak dapat menunjukkan terbentuknya zona hambat. Sediaan kumur yang mengandung minyak atsiri dan resin jernang telah berhasil dibuat serta stabil dalam penyimpanan namun belum memiliki aktivitas antibakteri yang mencukupi.

Kata kunci : Minyak atsiri, Resin jernang, obat kumur, antibakteri

***FORMULATION OF CLEAR MOUTHWASH BASED ON ESSENTIAL
OILS WITH A DISSOLUTION TECHNIQUE AND THE ADDITION OF
JERNANG RESIN EXTRACT (*Daemonorops draco*)***

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ABSTRACT

*Dental caries caused by *Streptococcus mutans* can be prevented with mouthwash, but synthetic formulations have the potential to cause side effects, so natural alternatives are needed. Essential oils (citronella, cinnamon, clove, lime) and jernang resin extract (*Daemonorops draco*) are known to contain antibacterial compounds. This study compared the antibacterial activity of essential oils and jernang resin in mouthwash formulations. Eight formulas were prepared, then evaluated including organoleptic, pH, viscosity, homogeneity, and tested for their antibacterial activity against *S. mutans* using the disc diffusion method. The results showed that in organoleptic examination the formulas did not provide differences in color, taste, or odor, except for the combination of lime and jernang which experienced a color change to cloudy red. In the pH test, all formulas were in the range of 6.2 – 7.5, Viscosity test in the range of 4-7 cP, homogeneity examination of all formulas showed homogeneous result and the cycling test showed that all formulas remained stable except F8 which displayed cloudiness. However, all mouthwash formulations with essential oil concentrations within safe limits and meeting color aesthetic failed to show inhibition zones. Mouthwashes containing essential oils and jernang resin have been successfully prepared and are stable during storage, but they do not yet have adequate antibacterial activity.*

Keywords : *Essential oils, Jernang resin, mouthwash, antibacterial*

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